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DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Office of Assistant Secretary for Housing—Federal Housing Commissioner

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MOBILE HOME

Construction and Safety Standards

Title 24—Housing and Urban Development

CHAPTER II—OFFICE OF ASSISTANT SECRETARY FOR HOUSING—FEDERAL HOUSING COMMISSIONER, DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

[Docket No. R–76–340]

PART 280—MOBILE HOME CONSTRUCTION AND SAFETY STANDARDS

Clarification and Guidance Regarding Transportation Standards (Interpretative Bulletin J–1–76)

The purpose of this Interpretative Bulletin is to provide clarification and guidance with respect to the transportation aspects of mobile home construction which are covered by Subpart J of the Federal Mobile Home Construction and Safety Standards published by the Department of Housing and Urban Development on December 18, 1975, at 40 FR 58752. This Bulletin clarifies those areas in which state activity is preempted by the Federal standards.

On May 11, 1976, the Department published the proposed Interpretative Bulletin, J–1–76, at 41 FR 19295. During and after the comment period that ended on June 10, 1976, the Department received eight comments on the proposed Interpretative Bulletin from manufacturers, suppliers and government agencies. The comments covered the following:

(1) The acceptability of used tires on new mobile homes;

(2) The qualifications of the motor carrier to determine acceptability of particular used tires on a new mobile home;

(3) Special provisions on the towing vehicle, including brakeaway braking system, safety chain, etc.;

(4) Existing state laws governing the number of axles, brake assemblies and required tire sizing;

(5) Latent damage reporting when the experience procedures are used to qualify the transportation system; and

(6) Excessive drawbar loading.

The Interpretative Bulletin has been revised taking into consideration the comments received, discussions and recommendations made by the National Mobile Home Advisory Council at its meeting on September 1, 1976, and reevaluations made within HUD. The following is a discussion of the changes made to the Bulletin as published in the FEDERAL REGISTER on May 11, 1976.

The reference to civil and criminal penalties has been deleted because there is adequate reference to such penalties at 24 CFR 3282.10.

The extent of the manufacturer's responsibility for reporting of latent damage failures has been revised to exempt units that are improperly loaded in excess of the manufacturer's recommendation from consideration in determining the 1 percent of maximum failure level when the experience criteria discussed in § 280.903(c)(2) are used to substantiate the transportation system.

The structural calculation guidelines interpreting §§ 280.903(c) and 280.904(b)(3) include all elements necessary to the structural integrity of the mobile home during transportation loading (i.e., transverse chassis and floor framing members, drawbar, etc.). The interpretation has also been modified to require consideration of the location of any opening in the sidewall rather than consideration only of the location of doors and windows.

The interpretation of § 280.904(b)(8) has been modified such that an upper limit of 3000# has now been placed on the maximum permissible tire loading. Within that maximum, tire loading may be increased up to 50 percent of the limit specified in MH–1 of the Tire and Rim Association Handbook (1975 edition).

Upon evaluation of the comments dealing with the utilization of used tires on new mobile homes, the Department determined that the motor carrier may not always be technically qualified to make the appropriate judgment of the acceptability of a particular used tire. Therefore, the evaluation procedure has been modified to require factory inspection of used tires. Accordingly, the Bulletin has been revised to require a visual inspection of individual used tires for structural and/or thermal defects, and also stipulates that each used tire shall have at least $\frac{2}{32}$ inch tread depth as determined by a tread wear indicator. Manufacturers, when utilizing used tires, shall incorporate into their quality control manual procedures for inspection of used tires.

Other minor editorial revisions and clarifications have been incorporated into the Bulletin.

OTHER CONSIDERATIONS

In order to assure that the chassis assembly functions as designed, the mobile home unit should be stabilized during the production process when such stabilization is necessary to the design of the chassis assembly. Such requirements should be incorporated into the manufacturer's quality control manual. One of the comments suggests that prior transportation system failures have resulted from overloading of the A-frame assembly and running gear system. In order to determine that the design load has not been exceeded, it is recommended that the manufacturer weigh a representative number of units to assure that his design assumptions are valid. It is further recommended that the weight slips be used by the IPIA to verify the design loads.

TRANSPORTATION RESEARCH PROGRAM

HUD is conducting transportation research in the following areas:

(1) *Tire Research.* The Department, in cooperation with the Department of Transportation, has begun a fire testing program to evaluate the service load factor of 50 percent as applied to mobile home tire ratings as listed in the Tire and Rim Association Handbook. The results will be compared with statistical data involving tire performance. As a result of this study, the Department may publish revisions to Subpart J or its interpretation relating to tire selection.

(2) *Transportation Study.* To develop more exacting techniques and analytical methods for predicting the response of the mobile home to primary and secondary movements and develop possible revisions to Subpart J to improve both the reliability and durability of the transportation system.

DEPARTMENT OF TRANSPORTATION INVOLVEMENT WITH MOBILE HOMES

In a letter dated May 5, 1976, from James B. Gregory, then Administrator of the National Highway Traffic Safety Administration (NHTSA), to Constance Newman, Assistant Secretary for Consumer Affairs and Regulatory Functions, Mr. Gregory stated that he had concluded that one result of the National Mobile Home Construction and Safety Standard Act of 1974 was the implied repeal of NHTSA's authority with respect to mobile homes and that, accordingly, the enactment had the effect of amending the National Traffic and Motor Vehicle Safety Act of 1966 to exclude mobile homes as defined by the Mobile Home Act. To this end, Mr. Gregory's letter indicated that a Federal Register notice would be prepared by their office to reflect that conclusion. To date, such a notice has not been published in the FEDERAL REGISTER.

With the pending withdrawal of NHTSA from the mobile home activity, the Department intends to develop a gross vehicle weight tag similar to that presently required by NHTSA.

The Bureau of Motor Carrier Safety (BMCS), a component of the Federal Highway Administration of the Department of Transportation, develops Federal safety standards pertaining to motor vehicles in use on highways.

The Office of Consumer Affairs and Regulatory Functions, in HUD, has been and continues to work with BMCS to assure that standards and regulations established by the two agencies are consistent. As a part of this cooperative effort, BMCS issued FHWA Notice N–7510.7 on September 27, 1976 in which BMCS instructed its personnel not to enforce, until further notice, Federal Motor Carrier Safety Regulation section 393.75(f)(2)—Tires. Section 393.75(f)(2) established tire loading requirements that are stricter than the HUD standard and interpretation which allow tires to be loaded to 150 percent of the tire manufacturer's load rating. The delay in enforcement is conditioned upon a speed limitation of 45 m.p.h. where tires are loaded beyond the tire manufacturer's load rating. This will assure, for the present, that no conflict exists between requirements established by the Department of Transportation and those issued by the Department of Housing and Urban Development.

FEDERAL PREEMPTION

A great deal of confusion has arisen as to which areas of highway transpor-

tation requirements have been preempted by the Federal Mobile Home Construction and Safety Standards and what areas of highway movement have not been preempted by the Federal standards. The Department recognizes the unique area of state jurisdiction over the general movement of vehicles within a state. However, the Department believes that existing state or local laws concerning aspects of performance identified in Subpart J, or its interpretation contained herein, are preempted under section 604(d) of the National Mobile Home Construction and Safety Standards Act of 1974. Thus, existing state laws requiring a specific number of axles, a minimum number of braking systems, specific tire sizes and otherwise governing aspects of the mobile home for which a Federal Mobile Home Construction or Safety Standard is now in existence are preempted.

The governing principle here is that a state is precluded from establishing any standard that differs from the Federal standard, and it is also precluded from establishing any requirements that interfere with the Federal standards and enforcement program. The preemptive nature of the Federal standard is discussed in 24 CFR 3282.11.

The Department has no jurisdiction to govern those aspects of highway movement that involve time of travel, unit dimension for safe operation over the arterial highway system, and regulation of the towing vehicle. The Department has not established standards for certain types of safety items such as breakaway systems installed on the towing vehicle, safety chains, or for other aspects of transportation, such as open side closure for transportation. HUD may, in the future, promulgate standards governing other aspects of mobile home performance to the extent that it has jurisdiction to do so. Where the Department is not authorized to establish a standard, and where the Department has established no standard, the responsibility for establishing appropriate requirements that do not conflict with the Federal standards or enforcement program remains with individual states.

The Department has determined that an Environmental Impact Statement is not required with respect to this rule. A copy of the Finding of Inapplicability is available for inspection any copying according to Department rules and regulations during regular business hours at the Office of the Rules Docket Clerk, Room 10141, Department of Housing and Urban Development, 451 7th Street, S.W., Washington, D.C.

It is hereby certified that the economic and inflationary impacts of the proposed rule have been carefully evaluated in accordance with OMB Circular A-107.

Accordingly, several sections of Subpart J of 24 CFR Part 280 are interpreted as follows:

INTERPRETATIVE BULLETIN J-1-76

Transportation—Subpart J of Part 280

A. SECTION 280.903(c)(2) GENERAL REQUIREMENTS FOR DESIGNING THE STRUCTURE TO WITHSTAND TRANSPORTATION, SHOCK AND VIBRATION

Documented evidence such as service records or other documents certified to by duly authorized personnel of the manufacturer is acceptable for compliance with this section when failures related to chassis damage (e.g., frame or drawbar damage, running gear failure, etc.) and body failure due to transportation loading do not exceed 1 percent of the total number of units ("Floors") transported upon that chassis. Latent damage failures (e.g., racked windows and doors, floor misalignment, etc.) resulting from primary or secondary movement, which are not related to improper siting or leveling of the mobile home or loading in excess of the manufacturer's recommendations during transport of the mobile home, shall be included in determining the 1 percent maximum failure level. If the manufacturer does not have or can not provide actual records of latent damage history, the manufacturer shall provide a statement that, to the manufacturer's knowledge, no latent damage has occurred as a result of transportation.

B. SECTION 280.903(c)—280.904(b)(3)—STRUCTURAL CALCULATION GUIDELINES FOR IN-TRANSIT CONDITIONS IN MOBILE HOMES.

General. The following engineering guidelines are descriptive of methods and design assumptions which may be used for analytical evaluation of in-transit loading conditions. These guidelines have been developed with emphasis on the design of the longitudinal structural components of the mobile home (e.g., main chassis girder beam, the sidewall, rim joist, etc.), as transportation loadings are ordinary critical in the longitudinal direction. However, all elements necessary to the structural integrity of the mobile home during in-transit loading are to be evaluated (e.g., transverse chassis and floor framing members, drawbar, etc.). HUD recognizes the complexity and variety of design assumptions and techniques which may be used in evaluating in-transit loading conditions and provides these guidelines as initial methods for determining compliance with this section. Due to this variation and complexity of assumptions, HUD has undertaken, as part of its transportation research study, the development of analytical methods for predicting the dynamic response of the mobile home to intransit loading.

Design Methods and Assumptions.—Design Loading. The summation of the following loadings may be used to determine the adequacy of the chassis in conjunction with the mobile home structure to resist in-transit loading:

(a) Dead load, the vertical load due to the weight of all structural and non-structural components of the mobile home at the time of shipment.

(b) Floor load, a minimum of 3 pounds per square foot.

(c) Dynamic loading effect, (0.25) [(a) + (b)].

However, the in-transit design loading need not exceed twice the dead load of the mobile home.

Design Considerations. To determine the adequacy of individual longitudinal structural components to resist the in-transit design loading, a load distribution based on the relative flexural rigidity and shear stiffness of each component may be utilized.

For the purpose of loading distribution, the sidewall may be considered to be acting as a "deep beam" in conjunction with other load carrying elements in determining the relative stiffness of the integrated structure. Further, by proper precambering of the chassis assembly, additional loading may be distributed to the chassis, and the remaining loading may be distributed to each of the load carrying components by the relative stiffness principle.

In addition, the analysis should include consideration for:

(1) Location of openings in the sidewall during transport and, when appropriate, provisions for reinforcement of the structure and/or chassis at the opening.

(2) Sidewall component member sizing and joint-splice analysis (i.e., top plate, etc.), and connections between load carrying elements.

C. SECTION 280.904(b)(6)—AXLES

Unless substantiated in the design to the satisfaction of the approval agency (DAPIA) by either engineering analysis, load tests, or documented evidence of actual transportation experience, there shall be no less than the following minimum number of 6000# rated axles with not less than the mobile home rated tires indicated in Table 1 and Table 2, on each mobile home or floor section of a multiple unit mobile home:

TABLE 1

Length of mobile home[1]	*No. of 6,000 pound rated axles equipped with 7 x 14.5 Mobile Home 8-ply tires*
12 foot wide:	
To 60 ft maximum	2
Greater than 60 ft to 80 ft maximum	3
14 foot wide:	
To 52 ft. maximum	2
To 76 ft maximum	3
To 80 ft maximum	4

TABLE 2

Length of mobile home[1]	*No. of 6,000 pound rated axles equipped with 8 x 14.5 Mobile Home 8-ply or 10-ply rated tires*
12 foot wide:	
To 65 ft maximum	2
Greater than 65 ft to 80 ft maximum	3
14 foot wide:	
To 56 ft maximum	2
Greater than 56 ft to 80 ft maximum	3

[1] Length of a mobile home is the "length" as defined in § 280.902(b).

Determination of the number of axles required by use of the above tables does not eliminate the requirement for each axle to be capable of withstanding the actual imposed dead load without exceeding the maximum allowable stresses for design axle life as recommended by the axle manufacturer, or the maximum tire load rating in § 280.904 (b)(8). If a manufacturer has submitted documented evidence of transportation experience to meet the requirements of § 280.-903(c)(2), the minimum number of axles required by the experience record may not be reduced by use of the above tables. (The number of axles must be consistent with and no less than the number and rating of the axles indicated in the experience record.)

D. SECTION 280.904(b)(8)—TIRES, WHEELS, AND RIMS

Tires shall be sized and fitted to axles in accordance with the gross axle weight rating determined by the mobile home manufacturer.

The permissible tire loading may be increased by utilizing a service load factor not to exceed 50 percent of the mobile home tire load limits specified in MH–1 of the Tire and Rim Association Handbook (1975 edition), but the individual permissible tire loading may not exceed 3,000 lbs. For example, the maximum tire loading for a 7 x 14.5 mobile home 8 ply tire each 70 PSI cold inflation pressure would be 2,805 lbs (1,870 lbs (MH–1 rating) $\times$ 1.5 (service load factor) = 2,805 lbs). The tire load limit specified in MH–1 shall be determined by the tire manufacturer in accordance with procedures described in 49 CFR 571.119.

Used tires may also be sized in accordance with the above criteria whenever the tread depth is at least $\frac{2}{32}$ of an inch as determined by a tread wear indicator. The determination as to whether a particular used tire is acceptable shall also include a visual inspection for thermal and structural defects (e.g., dry rotting, excessive tire sidewall splitting, etc.).

Wheels and rims shall be sized in accordance with the tire manufacturer's recommendations as suitable for use with the tires selected.

E. SECTION 280.904(b)(9)—BRAKE ASSEMBLIES

Unless substantiated in the design to the satisfaction of the approval agency by either engineering analysis or those alternatives listed in § 280.903(c)(1) and (2), there shall be a minimum of two axles equipped with brake assemblies on each mobile home floor or unit.

Whenever tests are used to verify the adequacy of the combined braking performance of the towing vehicle and the mobile home, the combined braking system shall be capable of assuring that the maximum stopping distance from an initial velocity of 20 mph does not exceed 40 feet. The stopping distance shall be measured from the point at which movement of the service brake pedal or control begins.

The towing vehicle and mobile home shall be in the center of a 12 foot wide lane when the tests begin and the tires shall not deviate from that lane during the test. The test shall be made on a level surface that is substantially dry, smooth, and free of loose material. The tests shall be made utilizing the actual combinations or running gear equipment to be used by the manufacturer in production.

Regardless of the method of substantiation, any substitution of equipment by the manufacturer shall be approved by the DAPIA, and have a rating no less than the equipment being replaced.

F. SECTION 280.904(b)(10)—LIGHTS AND ASSOCIATED WIRING

Federal Motor Vehicle Safety Standard No. 108 shall be deemed the applicable Federal standard to be used for location and performance of highway safety electrical lights and associated wiring for determining compliance with this section.

(Sections 604 and 625 of the National Mobile Home Construction and Safety Standards Act of 1974, 42 U.S.C. 5403 and 5424; and 7 (d) of the Department of Housing and Urban Development Act, 42 U.S.C. 3535(d).)

Effective date: This interpretation is effective December 7, 1976.

CONSTANCE B. NEWMAN,
Assistant Secretary for Consumer Affairs and Regulatory Functions.

[FR Doc.76-35906 Filed 12-2-76;1:08 pm]